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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHER J. DAWSON, RICK A. HAMILTON II, PAUL A. MOSKOWITZ, and CLIFFORD A. PICKOVER

> Appeal 2016-005560 Application 12/103,472 Technology Center 3600

Before BRADLEY W. BAUMEISTER, JEREMY J. CURCURI, and AMBER L. HAGY, *Administrative Patent Judges*.

HAGY, Administrative Patent Judge.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–11, 13–22, 25, and 26, which are all of the pending claims.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Appellants identify International Business Machines Corporation as the real party in interest. (App. Br. 1.)

² Claims 12, 23, and 24 have been canceled. (App. Br. 27, 32 (Claims App'x).)

STATEMENT OF THE CASE

Introduction

According to Appellants, "[e]mbodiments of the inventive subject matter generally relate to the field of virtual universe systems, and, more particularly, to proximity-based broadcast virtual universe systems." (Spec. \P 1.) Further according to Appellants, "[a] virtual universe ('VU') is a computer-based simulated environment intended for its residents to traverse, inhabit, and interact through the use of avatars." (*Id.* \P 2.)

According to Appellants' Specification, the claimed invention operates in the context of "[p]roximity-based transmission of information," which "disseminates relevant information" to consumers through their avatars in a virtual universe. (Spec. \P 14.) Businesses in the virtual universe may use proximity-based transmission of information "to encourage avatars to move near the designated focal point object within the virtual universe so that the avatars can be exposed to products and advertisements." (*Id.*)

One problem Appellants' invention purports to address is the issue of avatar density within a predetermined proximity of a focal point object causing an overload condition on the server system. (Spec. \P 14.) To address that problem, Appellants' claimed invention causes, in response to a determined overload condition, "[d]ynamic spawning of auxiliary focal point objects," which "reduces the load on virtual universe host servers and the corresponding client devices, and thus improves performance of the virtual universe system." (Id.)

Exemplary Claim

Claims 1, 11, 17, and 19 are independent. Claim 1, reproduced below with the disputed limitations italicized, is exemplary of the claimed subject matter:

1. A method comprising:

determining, at a server system, that a proximity of a virtual universe avatar with respect to a designated focal point object of a virtual universe is within a first proximity range of the designated focal point object, wherein said designated focal point object is associated with information, and in response:

selecting, at the server system, a first of a plurality of representations of the information based, at least in part, on said determining that the proximity of the virtual universe avatar with respect to the designated focal point object is within the first proximity range of the designated focal point object; and

transmitting the first representation of the information to the virtual universe avatar;

determining, at the server system, that the proximity of the virtual universe avatar with respect to the designated focal point object is within a second proximity range of the designated focal point object, and in response:

selecting, at the server system, a second of the plurality of representations of the information, and

transmitting the second representation of the information to the virtual universe avatar;

determining whether a loading condition of a hardware device of the server system has been exceeded, wherein the hardware device comprises at least

one of a memory, a processor, and a power component; and

in response to the loading condition of the hardware device of the server system being exceeded, creating an auxiliary focal point object in the virtual universe having a location that is different from a location of the designated focal point object.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Hirakawa et al. ("Hirakawa")	US 5,664,126	Sept. 2, 1997
Brush II et al. ("Brush")	US 6,023,270	Feb. 8, 2000
Matsuda	US 6,981,220 B2	Dec. 27, 2005
Jacob et al. ("Jacob")	US 2007/0168359 A1	July 19, 2007
Amjadi	US 2008/0140509 A1	June 12, 2008
Altberg et al. ("Altberg")	US 2008/0263458 A1	Oct. 23, 2008
Hamilton II et al. ("Hamilton")	US 2009/0046094 A1	Feb. 19, 2009

REJECTIONS

Claims 1–11, 13–22, 25, and 26 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. (Final Act. 2–4.)

Claims 1–3, 5–9, 11, 13–22, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brush, Amjadi, Altberg, Matsuda, Hirakawa, and Hamilton. (Final Act. 5–17.)

Claims 4 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Altberg and Jacob. (Final Act. 18–19.)

ISSUES

- 1. Whether the Examiner erred in rejecting claims 1–11, 13–22, 25, and 26 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.
- 2. Whether the Examiner erred in finding the combination of Brush, Amjadi, Altberg, Matsuda, Hirakawa, and Hamilton teaches or suggests "in response to the loading condition of the hardware device of the server system being exceeded, creating an auxiliary focal point object in the virtual universe having a location that is different from a location of the designated focal point object," as recited in independent claim 1 and commensurately recited in independent claims 11, 17, and 19.

ANALYSIS

A. Claim Construction

As an initial matter, before we assess the Examiner's rejections under sections 101 and 103, we must determine the scope of the claims. It is well settled that, during prosecution, the terms of a claim must be given their broadest reasonable interpretation consistent with Appellants' Specification, as they would be interpreted by one of ordinary skill in this art. *In re Morris*, 127 F.3d 1048, 1054–55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321–22 (Fed. Cir. 1989).

Claim 1 is a method claim that recites several steps, each of which steps requires "determining" whether a recited condition precedent has been met, and further recites additional steps to be taken "in response" to each condition precedent being met. For example, the first of two limitations principally relied upon by Appellants in arguing against all of the

Examiner's rejections of claim 1 recites "determining whether a loading condition of a hardware device of the server system has been exceeded." (App. Br. 22 (Claims App'x).) The second of the two relied-upon limitations immediately follows the first limitation and recites "in response to the loading condition of the hardware device of the server system being exceeded, creating an auxiliary focal point object in the virtual universe having a location that is different from a location of the designated focal point object." (*Id.* at 23).)

We conclude that claim 1 recites conditional steps that are performed only "in response" to their respective conditions precedent being met (e.g., "a loading condition of a hardware device of the server system [being] exceeded"), which need not happen. (*See* Ans. 3.) According to our precedent, as a matter of claim construction, the broadest reasonable interpretation of claim 1 encompasses a method in which the conditional steps are not performed. *See Ex parte Schulhauser*, Appeal No. 2013-007847, 2016 WL 6277792, at **3–5 (PTAB Apr. 28, 2016) (precedential).

For example, according to claim 1, unless a loading condition of a hardware device of the server system is exceeded, the step of "creating an auxiliary focal point object in the virtual universe having a location that is different from a location of the designated focal point object" need not be performed. The same analysis applies to independent claim 11, which also recites similar "determining" steps with respective conditional "in response" steps.

Independent claims 17 and 19 also recite limitations similar to the argued limitation of claim 1 (App. Br. 27–30 (Claims App'x)) and are argued collectively with claim 1 (*id.* at 12, 15, 20). Unlike claim 1,

however, claims 17 and 19 are directed to a "computer program product" and a "computer system," respectively, placing them in a different statutory class from claim 1, i.e., a product or system rather than a process or method under 35 U.S.C. § 101. The broadest reasonable interpretation of such product or system claims requires that structure and logic be provided to perform all recited functions, even those that are conditional. *See Schulhauser*, 2016 WL 6277792 at **6–7.

With this construction of the claims in mind, we turn now to the Examiner's rejections.

B. § 101 Rejections

1. Transitory Signals (claims 17 and 18)

We turn first to the Examiner's second basis of rejection of claims 17 and 18 under 35 U.S.C. § 101. (Final Act. 4.) Independent claim 17 recites "[a] computer program product . . . comprising: one or more computer-readable tangible storage devices" and "program instructions, stored on at least one of the one or more storage devices." (App. Br. 27–28 (Claims App'x).) The Examiner rejects claim 17 (and its dependent claim 18) under 35 U.S.C. § 101 as encompassing non-statutory subject matter, and states this rejection could be overcome if these claims were amended to recite that the computer medium is a "non-transitory medium." (Final Act. 4.)

Appellants' Specification provides no explicit definition of a "computer-readable tangible storage device." The Specification does describe a "machine-readable medium having stored thereon instructions," but does not limit that medium to excluding transitory media, which are non-statutory subject matter. *See In re Nuijten*, 500 F.3d 1346, 1356–57 (Fed. Cir. 2007). As the Board has held, "those of ordinary skill in the art would

understand the claim term 'machine-readable storage medium" would include signals *per se*, and where "the broadest reasonable interpretation" of a claim "covers a signal *per se*," the claim "must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter." *Ex parte Mewherter*, 107 USPQ2d 1857, 1862 (PTAB 2013) (precedential) (citing *In re Nuijten*, 500 F.3d at 1356–57). Similar analysis applies to a "computer-readable tangible storage device." *See id*.

Because Appellants' Specification does not define the "computer-readable tangible storage device" to exclude transitory media, we agree with the Examiner that a reasonable construction of the claim term "computer readable tangible storage device" and "program instructions," when viewed in light of the Specification, can be interpreted as including transitory forms of memory (e.g., propagating signals), which are unpatentable subject matter under 35 U.S.C. § 101. *See Ex parte Mewherter*, 107 USPQ2d at 1862. We, therefore, affirm the Examiner's rejection of claims 17 and 18 on this ground. We further note that Appellants do not address this ground of rejection, which also supports our summarily sustaining this rejection. *See* Manual of Patent Examining Procedure (MPEP) § 1205.02, 9th ed., Rev. 11, March 2014 ("If a ground of rejection stated by the examiner is not addressed in the appellant's brief, appellant has waived any challenge to that ground of rejection and the Board may summarily sustain it.").

2. Patent-ineligible Subject Matter

We turn now to the Examiner's rejection of all pending claims under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

Patent eligibility is a question of law. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). The Supreme Court has set forth an

analytical "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71–73 (2012)). In the first step, we determine whether the claims at issue are "directed to" a judicial exception, such as an abstract idea. *Alice*, 134 S. Ct. at 2355. If not, the inquiry ends. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). If the claims are determined to be directed to an abstract idea, then we consider under step two whether the claims contain an "inventive concept" sufficient to "transform the nature of the claim into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quotations and citation omitted).

Noting that the two stages involve "overlapping scrutiny of the content of the claims," the Federal Circuit has described "the first-stage inquiry" as "looking at the 'focus' of the claims, their 'character as a whole," and "the second-stage inquiry (where reached)" as "looking more precisely at what the claim elements add—specifically, whether, in the Supreme Court's terms, they identify an 'inventive concept' in the application of the ineligible matter to which (by assumption at stage two) the claim is directed." *Electric Power Grp, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). In considering whether a claim is directed to an abstract idea, we acknowledge, as did the Court in *Mayo*, that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. We, therefore, look to: (1) whether the claims focus on a specific means or method that

improves the relevant technology, or (2) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

Step One: Whether the Claims Are Directed to a Patent-Ineligible Concept (Abstract Idea)

Here, in rejecting the pending claims under § 101, the Examiner analyzes the claims using the *Mayo/Alice* two-step framework, consistent with the guidance set forth in the USPTO's "2014 Interim Guidance on Patent Subject Matter Eligibility," 79 Fed. Reg. 74618 (Dec. 16, 2014), in effect at the time the Final Office Action was mailed. (Final Act. 2–4.) Addressing the first step, the Examiner determines that claims 1–11, 13–22, 25, and 26 are "directed towards determining the proximity of the avatar with respect to the designated focal point object within the virtual universe world[,] which is considered to be an abstract idea inasmuch as such activity is considered both a method of organizing human activity [and] a fundamental economic practice." (Final Act. 2, 20.) In particular, the Examiner finds the claims are directed to the abstract idea of "enabling/disabling the redemption of offers based on the user's mobile device location itself." (*Id.* at 21.)

Appellants first take issue with the applied scope of the concept of "abstract ideas." In particular, Appellants argue that the Court in *Alice* did not say all methods of organizing human activity are abstract ideas, and thus insist that whether a claim is directed to a method of organizing human activity is not determinative of whether the claim is abstract. (App. Br. 10.)

We agree with Appellants that the Court did not suggest in *Alice* that all methods of organizing human activities are directed to an abstract idea, but we disagree that only "hedging and intermediate[d] settlement" are

within the scope of the "methods of organizing human activity" category of patent-ineligible abstract ideas, as Appellants suggest. (*See id.* at 10.) We similarly disagree with Appellants' premise that only "concepts that are fundamental and essential to science, technology, or modern commerce" fall within the scope of patent-ineligible abstract ideas. (*See* App. Br. 11–12.)

We further note that the Federal Circuit has repeatedly confirmed since *Alice* that the category of abstract ideas embraces "fundamental economic practice[s] long prevalent in our system of commerce," including "longstanding commercial practice[s]" and "method[s] of organizing human activity," even where those ideas are implemented using computer technology. *E.g.*, *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313 (Fed. Cir. 2016) (agreeing with the district court's conclusion that customizing web page content and budgeting using a communication medium is an abstract idea); *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015) (agreeing with the district court's conclusion that the claims recited the abstract idea of "retaining information in the navigation of online forms").

As the Examiner finds, Appellants' claims are directed to "enabling/disabling the redemption of offers based on the user's mobile device location itself." (Final Act. 21.) In particular, Appellants' claims recite presentation of certain information to a consumer through a virtual universe avatar depending on whether the avatar is within a certain proximity of a designated focal point in the virtual universe. (App. Br. 22 (Claim's App'x).) Stated otherwise, Appellants' claims are directed to the fundamental economic practice of targeting information (e.g., advertisements) to nearby consumers (represented in the virtual universe by

avatars), a concept illustrated in Appellants' Figure 1A. (*See also* Spec. ¶ 14.) As such, Appellants' claims are similar to claims that have been determined by courts to be directed to abstract ideas. *See Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015) (finding the practice of tailoring advertising to individual customers to be a "fundamental . . . practice long prevalent in our system"); *see also Ultramercial, Inc. v. Hulu*, LLC, 772 F.3d 709, 714–15 (Fed. Cir. 2014) (finding "showing an advertisement before delivering free content" to be an abstract idea).

Thus, at step one of the analysis, we are not persuaded that the Examiner erred in determining that the claims are directed to patent-ineligible subject matter—that is, to an abstract idea.

Step Two: Whether Additional Elements Transform The Idea Into Patent-Eligible Subject Matter

Having found that the claims are directed to an abstract idea, the Examiner also finds "[t]he claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims merely amount to the application or instructions to apply the abstract idea." (Final Act. 2.) In particular, the Examiner finds:

The claims merely amount[] to the application or instructions to apply the abstract idea (i.e. enabling objects based on the avatars location) on a computer, and is considered to amount to nothing more than requiring a generic computer system (e.g. a computer product/readable medium comprising a generic element such as a user interface and an application for performing the steps of the [c]laimed invention) to merely carry out the abstract idea itself. As such, the claims, when considered as a whole, are nothing more than the instruction to implement the abstract idea in a particular, albeit well-understood, routine and conventional technological environment.

(*Id.* at 21.)

Appellants argue the Examiner's findings are in error because the Examiner overlooks that the claims "represent one or more improvements to the technical field of hardware devices of servers hosting a virtual universe." (App. Br. 12.) Specifically, Appellants contend the claims "represent one or more improvements to the technical field of server technology," because they recite "creating an auxiliary focal point object in the virtual universe based on a loading condition of a hardware device of the server system being exceeded." (*Id.*) According to Appellants, this recitation is a meaningful limitation that amounts to "significantly more" than the alleged abstract idea. (*Id.* at 12–13.)

We agree with Appellants that the recitation of creating an auxiliary focal point object in the virtual universe in response to a loading condition of a hardware device of the server system being exceeded represents a technological improvement to the functioning of a server network. In particular, it addresses the technological challenge of balancing loading conditions on a server system underlying a computer-centric virtual universe. (App. Br. 12.) As such, this claimed solution is necessarily rooted in computer technology, similar to the additional elements in *DDR Holdings*, *LLC v. Hotels.com*, *L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

As we have concluded above, however, the recitation in the method claims (independent claims 1 and 11 and respective dependent claims) of "creating an auxiliary focal point object" is a conditional limitation that need not be performed if the condition precedent ("a loading condition of the hardware device . . . has been exceeded") is not satisfied. Therefore, as the Examiner correctly determined, this recitation need not be considered in

assessing whether these claims are patent-eligible subject matter. (Ans. 3.) We, therefore, are unpersuaded of error in the Examiner's determination that the method claims do not contain additional elements that transform them into patent-eligible subject matter. Rather, we agree with the Examiner that the method claims, properly construed at least in those situations in which a loading condition has *not* been exceeded, require only implementing the recited abstract idea through the use of a generic computer system in a "routine and conventional technological environment." (Final Act. 21.)

We reach a different conclusion, however, as to product / system claims 17–20, which—as we also note above—require the conditional functionality to be present in the program instructions. *See Schulhauser*, 2016 WL 6277792, at **6–7. As to those claims, we are persuaded that they do contain additional elements that transform them into patent-eligible subject matter.

For the foregoing reasons, we sustain the Examiner's 35 U.S.C. § 101 rejections of method claims 1–11, 13–16, 21, 22, 25, and 26 as being directed to patent-ineligible subject matter. As to claims 17–20, we reverse the § 101 rejection (but, as noted *supra*, we maintain the separate § 101 rejection of claims 17 and 18 as encompassing transitory media).

B. § 103 Rejection

1. Claims 1–11, 13–16, 21, 22, 25, and 26

The Examiner finds the combination of Brush, Amjadi, Altberg, Matsuda, Hirakawa, and Hamilton teaches or suggests the limitations of independent claims 1 and 11. (Final Act. 5–6, 9–11.) In arguing that the Examiner's findings are in error, Appellants focus on the recitation in those claims of "determining whether a loading condition of a hardware device . . .

has been exceeded," and "in response . . . creating an auxiliary focal point object in the virtual universe." (App. Br. 15–20.)

With regard to the disputed limitation, the Examiner relies on Hirakawa and Hamilton, finding that Hirakawa teaches "determining whether a loading condition of a hardware device of the server system has been exceeded" (Final Act. 6 (citing Hirakawa 11:42–58)) and also finding Hamilton teaches "in response . . . creating an auxiliary focal point object in the virtual universe . . ." (*id.* (citing Hamilton ¶ 88).)³

With regard to method claims 1–11, 13–16, 21, 22, 25, and 26, we are not persuaded of Examiner error in the rejection under § 103. As noted *supra*, the broadest reasonable interpretation of independent claims 1 and 11 (and the respective dependent claims) includes situations that fail to satisfy the recited conditions precedent, and, in those situations, the disputed conditional method step is not performed. *See Schulhauser*, 2016 WL 6277792, at **3–6 (concluding that the broadest reasonable interpretation of a claim encompassed situations in which conditional method steps "need not be reached"). Because the broadest reasonable interpretation of the method claims does not require performing, *inter alia*, the conditional "creating an auxiliary focal point object" step at issue, the Examiner is not required to present evidence of the obviousness of this step. *See Schulhauser*, 2016 WL 6277792, at *4 ("The Examiner did not need to present evidence of the

³ The Examiner's Final Action contains an apparent typographical error in referring to "Hirakawa" for this finding, instead of "Hamilton." (Final Act. 6.) This error is apparent in the fact that Hamilton, not Hirakawa, contains numbered paragraphs and also contains the subject matter discussed by the

Examiner. (See also Ans. 5–6 (quoting Hamilton ¶ 88).)

obviousness of the remaining method steps of claim 1 that are not required to be performed under a broadest reasonable interpretation of the claim.").

Appellants do not present additional arguments challenging the Examiner's findings regarding the other limitations of the method claims. We, therefore, are not persuaded of error in the Examiner's 35 U.S.C. § 103(a) rejection of independent claims 1 and 11, and we sustain that rejection of those claims along with the § 103(a) rejections of their respective dependent claims, which Appellants argue collectively with the independent claims. (*See* App. Br. 20.)

2. Claims 17–20

With regard to claims 17–20, which recite a "computer program product" (claims 17–18) and a "computer system" (claims 19–20), we are constrained, on this record, to reverse the Examiner's § 103(a) rejection. As noted *supra*, the disputed limitation of the method claims, which is commensurately recited in claims 17–20, cannot be disregarded in an obviousness analysis because the broadest reasonable interpretation of such product or system claims requires that structure and logic be provided to perform all recited functions, even those that are conditional. *See Schulhauser*, 2016 WL 6277792 at **6–7.

Considering the "auxiliary focal point object" limitation of these claims, we are persuaded of Examiner error. In particular, the Examiner's findings regarding this limitation appear to be premised on a misreading of the teachings of Hamilton. Contrary to the Examiner's findings, Hamilton does not teach or suggest "creating an auxiliary focal point object in the virtual universe." (*See* Ans. 5–6 (citing Hamilton ¶ 88).) Rather, the cited portion of Hamilton discloses creating one or more projected avatars, which

are copies of an associated avatar that are placed in different locations and have different attitudes and/or rendering effects applied. (Hamilton \P 88.) The Examiner does not make findings to bridge the gap between Hamilton's disclosure of creating *copies of avatars* and the claimed requirement of creating *auxiliary focal point objects*.

For the foregoing reasons, we conclude the Examiner erred in finding the prior art teaches or suggests program instructions to "create an auxiliary focal point object in the virtual universe having a location that is different from a location of the designated focal point object," as recited in independent claims 17 and 19 and their respective dependent claims. We, therefore, do not sustain the Examiner's 35 U.S.C. § 103(a) rejection of claims 17–20.

CONCLUSION

In summary:

Claims Rejected	Basis	Reference(s)	Claims Affirmed	Claims Reversed
1–11, 13–	§ 101	N/A	1–11, 13–16,	17–20
22, 25, and	(abstract		21, 22, 25, and	
26	idea)		26	
17 and 18	§ 101	N/A	17 and 18	none
	(transitory			
	signals)			
1-3, 5-9,	§ 103(a)	Brush, Amjadi,	1–3, 5–9, 11,	17–20
11, 13–22,		Altberg,	13–16, 21, 22,	
25, and 26		Matsuda,	25, and 26	
		Hirakawa, and		
		Hamilton		
4 and 10	§ 103(a)	Altberg and	4 and 10	None
		Jacob		
Summary			1–11, 13–18,	19 and 20
			21, 22, 25, and	
			26	

DECISION

The Examiner's 35 U.S.C. § 101 rejections of claims 1–11, 13–18, 21, 22, 25, and 26 are affirmed.

The Examiner's 35 U.S.C. § 101 rejection of claims 19 and 20 is reversed.

The Examiner's 35 U.S.C. § 103(a) rejections of claims 1–11, 13–16, 21, 22, 25, and 26 are affirmed.

The Examiner's 35 U.S.C. § 103(a) rejection of claims 17–20 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART